



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 31 2012

REPLY TO THE ATTENTION OF WC-15J

CERTIFIED MAIL 7009 1680 0000 7669 4483
RETURN RECEIPT REQUESTED

Mr. Andrew Blocksom
Patriot Energy Partners, LLC
7716 Depot Road
Lisbon, OH 44432

Subject: Compliance Sampling Inspection Report

Dear Mr. Blocksom:

The enclosed inspection report documents the findings of a recent Compliance Sampling Inspection (CSI) conducted by the U.S. Environmental Protection Agency on September 12 to September 16, 2011.

The purpose of the CSI is to determine if Patriot Energy Partners was in compliance with its Industrial User Pretreatment permit, in particular the Centralized Waste Treatment Regulations at 40 CFR 437 Subpart C. This was achieved through sampling the final treated effluent during the week of the inspection. In addition, self monitoring data was reviewed for compliance with permit limitations.

Enclosed is a copy of the report for your review. Thank you for the time and effort that you and your staff spent during the inspection. If you have any questions, please contact Jenny Davison of my staff at 312-886-0184 or davison.jenny@epa.gov.

Sincerely,

Barbara VanTil, Chief
Section 1
Water Enforcement and Compliance Assurance Branch

Enclosure

cc: Paul Novak (Ohio EPA) w/enclosure
Tom Angelo (City of Warren) w/enclosure

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 5
CLEAN WATER ACT COMPLIANCE SAMPLING INSPECTION REPORT

I. PERMITTEE IDENTIFICATION

Facility Name and Address

Patriot Water Treatment LLC
2840 Sferra Avenue NW
Warren, Ohio 44483

Industrial User Permit

Wastewater Discharge Permit that was issued by the Warren Pollution Control Center – Pretreatment Program. The reissued permit became effective on April 19, 2011; the listed expiration date specified the “Effective Date of newly approved local limits”.

Pretreatment Program

Warren Pollution Control Center – Pretreatment Program

Dates of Inspection:

September 12-15, 2011

II. PARTICIPANTS

Facility Representatives:

Andrew Blocksom, Patriot Energy Partners, President/Owner, 330-853-9321
Jeff Faloba, Patriot Energy Partners, Operations Manager, 330-853-2393
John S. Evan, Environmental Consultant, 330-747-3975

U.S. Environmental Protection Agency Region 5:

Water Enforcement and Compliance Assurance Branch

Mike Lukowich, Environmental Engineer, 312-353-4645
Jenny Davison, Environmental Scientist, 312-886-0184
Jeremy Deyoe, Environmental Engineer, 312-353-8512
Keith Middleton, Environmental Engineer, 312-886-6465

Cleveland Office of Enforcement and Compliance Assurance

Mark Moloney, Environmental Engineer, 440-250-1709
Cher Salley, Geologist, 440-250-1710

Air Enforcement and Compliance Assurance Branch

Shelly Heger, Environmental Scientist, 312--886-4510
Katharina Bellairs, Environmental Engineer, 312-353-1669

Report Prepared by:

Jenny Davison

Report Date: August 31, 2012

Inspector Signature Jenny Davison

III. OBJECTIVE

The purpose of this inspection was to evaluate compliance with the limitations and conditions contained in the City of Warren's (the City) sewer use ordinance, Patriot Energy Partners industrial user permit, and the Clean Water Act's pretreatment regulations.

Personnel from the U.S. Environmental Protection Agency, Region 5, Office of Enforcement and Compliance Assurance and the Water Division conducted an onsite investigation and sampled the influent and effluent waste water streams from Patriot Water Treatment facility, which is an industrial user discharging to the Warren Water Pollution Control Center (WPCC) facility. In addition, sludge generated at the Patriot Water Treatment Facility was sampled during this inspection.

IV. FACILITY DESCRIPTION AND WASTE WATER TREATMENT PROCESS

On September 12, 2012, EPA representatives presented their credentials to Andrew Blocksom and Jeff Faloba and conducted a brief opening conference to outline the scope and agenda for the sampling and compliance inspection. The sampling inspection continued through September 15, 2012.

Patriot Energy Partners, LLC is a commercial industrial waste treatment facility and is a permitted categorical industrial user contributing wastewater to the City's WPCC (**Attachment A**). This facility, which is located at 2840 Sferra Avenue NW in Warren, Ohio, is permitted to pretreat gas well wastewater and is regulated under Subpart C, Organics Treatment and Recovery, of the Centralized Waste Treatment effluent guidelines category (40 CFR 437, Subpart C). The Patriot plant operates 24 hours per day, 7 days per week and has 9 to 15 employees working at a time during the day, and 2 to 3 people in the evenings.

Patriot receives wastewater by tanker truck. Mr. Blocksom estimated they receive between 3 to 60 trucks a day. Patriot receives wastes from 9 customers. These include Rex Energy, Gulfport Energy, Rice Energy, HG Energy, Envirest, Exco Resources, Tanglewood, Shell and EOG. The facilities typically call to schedule a drop off a wastewater load in advanced of drop-off. When the trucks arrive, a lower explosive limit meter is used to check for flammable material. Next, two samples are taken by the truck driver of each truck, one from the top and one from the bottom of the truck's holding tank. The samples are taken to the onsite lab. The top sample is given a flash test while the bottom is tested for solids. In addition, pH, conductivity, and a radioactivity scan are conducted for each sample. The results of these are recorded on a waste manifest (**Attachment B**). Facilities that are heavy in total dissolved solids (TDS) (120,000 mg/L or more) are sent back to the trucker, as they cannot be treated at Patriot.

After doing the initial sampling, the truck goes to one of four lanes on the south side of the facility to offload their wastewater (Photos 1 and 2). This water is pumped to a 52,000 gallon above ground tank (Photos 3 and 4). The wastewater is routed from the 52,000 gallon tank to a 622,000 gallon above ground tank (Photos 4 and 5). Both tanks reportedly are coated steel with an internal liner and interstitial monitoring. The 622,000 gallon tank is equipped with a re-circulating pump to mix and aerate the tank contents. Wastewater flows from the 620,000 gallon tank to six hydraulically connected tanks located inside the treatment building (Photos 6-8). These are used to further remove suspended solids. The water is then pumped to a mixing compartment of a clarifier, where alum is added (Photos 9, 11, 12). The wastewater then flows to a second mixing compartment where caustic is added. Both compartments contain mechanical mixers. Cationic

polymer is added in a flash mix compartment prior to the wastewater flowing into an inclined plate clarifier (Photos 10, 11, 12). The clarifier overflow is routed to two sand filters and subsequently discharged to the city sewer through a parshall flume. An automatic meter in the flume takes real time measurements of TDS, pH and gallons per minute. These analyses are cross-referenced with grab samples taken on the hour. The pretreatment permit allows Patriot to discharge up to 100,000 gallons per day (GPD). The storage capacity allows Patriot, however, to store 740,000 gallons onsite and treat 300,000 GPD.

Sludge generated in the internal tanks and in the inclined plate clarifier is routed to a sludge holding tank (Photos 7, 8, 14). Solids are dewatered in a plate and frame filter press (Photo 13). The waste is reportedly non-hazardous. At the time of the inspection a temporary mud storage basin was being utilized for periods with large sludge cake production (Photo 14). A flow diagram of the treatment process from the company's permit to install application is presented as **Attachment C**.

V. PATRIOT'S SELF-MONITORING REQUIREMENTS AND SAMPLING

In addition to the sampling conducted continuously from the flow meters at the end of treatment, the company performs self-monitoring at the parshall flume outfall listed in the industrial user pretreatment permit. The permit regulates the wastewater discharge from the facility to the City's sanitary sewer system. Patriot samples for the parameters listed in Section 1 and 5.D of their pretreatment permit on a monthly basis in compliance with Section II of the Sewer Use Ordinance and 40 CFR 437 Subpart C. Keith Folman from the City's WPCC pretreatment program provides the sampling equipment to Patriot to conduct their sampling; Patriot conducts the sampling, and submits the samples to a lab and sends a copy of the lab results to the City. Mr. Folman said in exception to the first compliance monitoring report in January 2011, the City has always submitted the information in a timely manner (**Attachment D**).

Since January 2011, Patriot has been in compliance with their discharge limits in their permit, except in June 2011 when they exceeded their maximum allowable volume by 11 gallons. The City followed up with a Notice of Violation (**Attachment E**). Patriot has also exceeded their permit limits in the sewer use ordinance for chemical oxygen demand (COD), TDS, total suspended solids (TSS), and ammonia. The special requirements of the permit and section 925.03 (d) of the sewer use ordinance allow for these parameters to be discharged in excess of the pretreatment permit limits, provided these exceedances do not upset the WPCC's treatment process and Patriot pays surcharge fees.

VI. EPA SAMPLING INVESTIGATION

The primary objective of the sampling investigation was to determine whether the limits and conditions contained in the Patriot Water Treatment LLC's industrial user permit were being met. EPA sampled Patriot's waste on three consecutive days, September 13 to 15th, 2012. The Sampling Report and results are attached (**Attachment F**). Table 3 of the Sampling Report lists the results of the sampling of the wastewater influent and effluent at Patriot. A summary of the range of results obtained over the three-day period are listed in Table 1 of this inspection report. While concentrations for TSS, COD, and TDS were exceeded, the special requirements of the permit and section 925.03 (d) of the sewer use ordinance allow for these parameters to be discharged in excess of the pretreatment permit limits, provided these exceedances do not upset the WPCC's treatment process and Patriot pays surcharge fees.

Results of the sludge press sample are listed in Table 4 in the Sampling Report. It appeared that none of the sludge sample results were above the RCRA Regulatory Toxicity Levels.

Table 1. Discharge Limits and Range of Results for Patriot Wastewater Samples			
Parameter	Patriot IU Discharge Limits	Range of Sample Results 9/13-9/15/2011	
		Influent	Effluent
Flow (GPD)	100,000 GPD	---	97,971 – 99,985 GPD
Total Suspended Solids, values (mg/L)	250*	278 - 572	213 – 1,030
Total Dissolved Solids, (mg/L)	1500*	27,100 - 46,900	20,100 – 32,400
Ammonia-N (mg/L)	35.0	**	**
COD (mg/L)	600*	3,480 – 6,010	3,460 – 4,420
Total Cyanide (mg/L)	0.335 (free cyanide)	ND ***	ND ***
T. Antimony (mg/L)	0.329	ND	ND
T. Arsenic (mg/L)	0.200	ND	ND
T. Chromium (mg/L)	1.5	0.0142 – 0.0366	0.0236 – 0.0433
T. Copper (mg/L)	0.830	0.0285 – 0.0483	0.0201 – 0.0497***
T. Molybdenum (mg/L)	0.699	ND	ND
T. Mercury (mg/L)	0.0035	ND	ND
T. Nickel (mg/L)	1.80	ND	ND
T. Selenium (mg/L)	1.470	ND	ND
T. Zinc (mg/L)	0.497	ND	ND
Phenol (mg/L)	3.65	0.0179 – 0.0361***	ND – 0.0205***
2-Methylphenol (mg/L)	1.92	ND – 0.00802***	ND – 0.0102***
2,4,6-Trichlorophenol (mg/L)	0.155	ND	ND
Acetone (mg/L)	30.2	ND – 4.470	ND – 3.260
2-Butanone (mg/L)	4.81	ND	ND
ND – Not Detected T - Total *Concentrations exceeding these limits are surchargeable by the City of Warren. For TDS, 1500 mg/L is the SUO limit that is surchargeable, however, Patriot cannot exceed 50,000mg/L. (Section 5. Part D of the Permit) **Results not usable due to quality problems *** Some or all data qualified by laboratory (see data sheets in Sampling Report for more info)			

VII. DOCUMENTS COLLECTED AND REVIEWED DURING THE INSPECTION

The following documents were collected during the inspection.

1. Photolog (14 Photos taken on 9/15/2011) (**Attachment G**)
2. Waste Quick Report for Zircoa (2/15/2011-4/26/2011) (**Attachment H**)
3. Hourly Grab Sample Log for pH, TDS, Flow (8/15/2011-9/15/2011) (**Attachment I**)
4. Summary Sheets Manifest from Producer Receiving Report from PNT (5/31/2011-9/15/2011) (**Attachment J**)
5. Lab Bench Sheets & Water Manifests for Incoming Truck Loads for 8/15/2011-9/15/2011 (**Attachment K**)

VIII. EXIT BRIEFING

At the conclusion of the inspection, EPA conducted a closing conference and informed Mr. Blocksman and Mr. Faloba that there were no initial areas of concern observed during the inspection. We further informed Mr. Blocksman and Mr. Faloba that an evaluation of the sampling results described in Section VI and a review of the documents received in Section VII needed to be completed before an official compliance determination could be made.

IX. INSPECTION FINDINGS

Areas of Noncompliance

A review of self-monitoring reports since the issuance of the Industrial User permit indicated that:

- In January 2011, the company did not submit its self-monitoring report in a timely manner described in Attachment D; and
- In July 2011, the company exceeded the discharge limitation for flow contained in the permit described in Attachment E.